

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method of making an intravascular catheter by securing a polymeric member to a metallic member in a high strength fluid tight relationship, comprising:
 - a) mounting the polymeric member against the metallic member;
 - b) mounting a heat shrinkable collar about said polymeric member; and
 - c) applying heat ~~such that said heat shrinkable collar causes~~ externally directly to said collar so as to cause said collar to shrink and hot press the polymeric member ~~to be hot pressed~~ against the metallic member at a temperature above the glass transition temperature and below the melting point of the ~~polymeric material of the~~ polymeric member ~~while being subjected to plastic deformation.~~
2. (Previously Amended) The method of claim 1 wherein the polymeric member is a tubular element with an inner lumen extending therethrough and at least part of the metallic member is disposed within the inner lumen of the polymeric member and the heat shrinkable collar surrounds only the portion of the polymeric member that surrounds the metallic member within the inner lumen.
3. (Previously Amended) The method of claim 1 wherein the polymeric member comprises a thermoplastic polymer selected from the group consisting of polyetheretherketone, ployetheramide, polyphenylene sulfide and polysulfone, and including causing the temperatures of both the polymeric and metallic members to increase to a temperature above the glass transition temperature of the thermoplastic polymer.

4. (Canceled)

5. (Previously Amended) The method of claim 1 wherein the heat shrinkable collar is removed after heat has been applied.

6. (Canceled)

7. (Previously Amended) The method of claim 1 wherein the heat shrinkable collar is formed of a fluoropolymer.

8. Claims 8-15 (Canceled)

16. (Currently Amended) A method of making an intravascular catheter with an elongated shaft, by securing a polymeric member to a metallic tubular element in a high strength fluid tight relationship, comprising:

- a) mounting the polymeric member against the metallic tubular member so that the polymeric tubular member is in contact with a surface of the metallic tubular member; and
- b) mounting a heat shrinkable collar about said polymeric member; and
- c) applying heat ~~such that said heat shrinkable collar causes~~ externally directly to said collar so as to cause said collar to shrink and hot press the polymeric member ~~to be hot pressed~~ against the metallic member at a temperature above the glass transition temperature and below the melting point ~~of the polymeric material~~ of the polymeric member, so that the polymeric member is bonded to the surface of the metallic tubular member by a hot pressed bond, wherein the polymeric tubular member has a deformed section defined by the hot pressed bond, and a nondeformed section longitudinally adjacent to the deformed section and disposed about the surface of the metallic tubular member.

17. Claims 17-18 (Canceled)

19. (Previously Added) The method of claim 5, further comprising disposing a masking layer between said polymeric member and said heat shrinkable collar before the application of heat.

20. (Previously Added) The method of claim 16 wherein the heat shrinkable collar is removed after heat has been applied.

21. (Previously Added) The method of claim 20, further comprising disposing a masking layer between said polymeric member and said heat shrinkable collar before the application of heat.

REMARKS

Claims 1-4, 6 and 16 were rejected under 35 USC §103(a) as obvious over Graver, Sr. (U.S. Patent No. 4,390,668) in view of Sirhan et al. (U.S. Patent No. 5,743,875) and further in view of EP 0 471 238 A2. Pursuant to the telephonic interview, the independent claims have been amended to emphasize the fact that the method calls for the direct application of heat from an **external** source to the collar so as to cause it to shrink and thereby exert pressure on the polymeric member which in turn causes the polymeric member to become heat-bonded to the underlying metallic member. In stark contrast thereto, the cited primary reference calls for the heating of the **needle**, either by electromagnetic heating (column 4, line 41), electrical resistance or conduction (column 5, line 13), in order to melt the thermoplastic member 20. Moreover, there is no suggestion that the elastomeric member 24 is subject to any significant heat gain let alone a heat gain that would be sufficient to cause a heat shrinkable material to shrink.

Applicant also respectfully reemphasizes that heat shrinkability is not an **inherent** property of vinyl compounds. While certain vinyl compounds can admittedly be rendered heat shrinkable, special processing is nonetheless required. Most notably, the material must be subjected to a controlled expansion step whereby the magnitude and orientation of such expansion will determine the magnitude and the orientation of the shrinkage that the material will undergo upon subsequently being heated. It is to be noted that the cited secondary reference alludes thereto in the Examples (column 3 and 4) by identifying a very specific vinyl-containing material (ethylene-vinylacetate copolymer) and describing the process for rendering the extrudate heat shrinkable (after crosslinking, heating, expanding and cooling while expanded). In view of the fact that there is absolutely no teaching that the vinyl material used in the elastomeric member 24 of the cited reference is to be subjected to such processing, there is therefore no suggestion that such element will in fact shrink upon being heated, let alone that

such shrinkage is to have the desired effect, i.e. a reduction in diameter rather than in length and of sufficient magnitude to form a hot pressed bond **as a result of such shrinkage**. In view of the fact that the reference clearly teaches reliance on the interference fit between the second portion 16 and the first portion 14 upon initial assembly of the components to generate the desired compressive force (column 3, lines 47-53 and column 4, lines 17 and 27) rather than a force generated by any shrinkage due to heating, a very different **method** is being taught. Moreover, the primary reference teaches away from relying on the heat-shrinking properties of a collar to generate the compressive force necessary to form a melt bond to the extent that steps are taken to avoid deformation in general of, let alone shrinkage in particular of the assembly 10 (col 8, line 49-54).

It is therefore respectfully submitted that the invention as claimed in independent claims 1 and 16 calls for a different and non-obvious method for bonding dissimilar components of an intravascular catheter than is taught by the cited combination of references to thereby effectively overcome the obviousness rejection.

Claims 5, 7 and 20 were rejected under 35 USC §103(a) as obvious over Graver, Sr. in view of Sirhan et al. and further in view of EP 0 471 238 A2 and Riggs (U.S. Patent No. 4,636,272). In view of the patentability of the underlying independent claims as argued above, it is respectfully submitted that any claims depending therefrom similarly avoid obviousness.

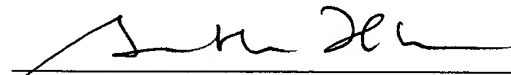
Claims 19 and 21 were rejected under 35 USC §103(a) as obvious over Graver, Sr. in view of Sirhan et al. and further in view of EP 0 471 238 A2, Riggs (U.S. Patent No. 4,636,272) and JP 60-004579. In view of the patentability of the underlying independent claims as argued above, it is respectfully submitted that any claims depending therefrom similarly avoid obviousness.

In light of the above amendments and remarks, applicant earnestly believes the application to be in condition for allowance and respectfully requests that it be passed to issue.

Respectfully submitted,

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